

REMARKS

Applicants appreciate the thorough examination of the present application as evidenced by the Office Action. Applicants further appreciate the indication that Claim 17 is allowable and that dependent claims 3-10, 13-16, 20-27 and 30-37 would be allowable if rewritten in independent form including all limitations of the base claim and any intervening claims. In response, Claims 3, 13, 20 and 30 have been amended to include the recitations of previously pending independent Claims 1, 11, 18 and 28, respectively. Claim 6 has also been amended to clarify that the "setting step" refers to the step of "setting a carrier drop detection threshold". Accordingly, Applicants submit that Claims 3, 13, 20 and 30 and the claims that depend directly or indirectly therefrom are now in form for allowance. Applicants have also amended Claims 1, 11, 18 and 28 to include additional recitations; however, no new matter has been added. As such, Applicants respectfully submit that all of the pending claims are patentable for the reasons discussed below.

Information Disclosure Statement

Applicants respectfully request that the Examiner consider the non-patent references submitted in the Second Duplicate Submittal of Information Disclosure Statement of September 16, 2003 and that the Examiner provide an initialed copy of the PTO-1449 form indicating consideration of the references. Applicants submit herewith a copy of the PTO-1449 form and a copy of the postcard returned by the USPTO indicating that copies of the references were provided with the filing of the Request for Reconsideration After Final of September 16, 2003. As such, Applicants believe no fee is due and that they are entitled to consideration of the references in light of the apparent misfiling of the originally submitted documents by the Patent Office.

The Prior Art Rejections

Claims 1, 2, 11, 12, 18, 19, 28 and 29 remain rejected as being anticipated or obvious in view of United States Patent No. 5,625,643 to Kaku et al. ("Kaku"). Applicants have amended independent Claims 1, 11, 18 and 28 to recite:

1. A method for modem carrier drop detection comprising the steps of:
demodulating a received signal to provide signal data;
detecting a signal strength for a portion of the received signal
corresponding to a selected data pattern in the signal data;
establishing a carrier drop detection threshold at a determined level
relative to the signal strength; and
detecting a carrier drop based on the carrier drop detection threshold.

(*Emphasis added*). Claims 11, 18 and 28 have been similarly amended to include corresponding system, means for, and computer program product recitations. Applicants submit that support for these amendments may be found in the original specification at page 13, lines 22-30 and page 14, lines 23-30. As such, no new matter has been added. Applicants further submit that at least the highlighted recitations of Claim 1 are neither disclosed nor suggested by Kaku for at least the reasons set forth below.

Kaku describes a system where a first energy level (threshold L1) is used to detect the presence of a carrier, and a second energy level (threshold L2) is used to detect the absence of a carrier. *See* Kaku, Fig. 9 and Col. 12, lines 16-20. In other words, threshold L1 is a carrier presence detection threshold, while threshold L2 is a carrier drop detection threshold. Furthermore, these thresholds are "determined in advance." *See* Kaku, Col. 12, lines 16-20. Kaku's system compares the power of a received signal with the first predetermined threshold L1 in order to determine carrier presence. *See* Kaku, Col. 12, lines 20-27. If the received signal power is greater than threshold L1, a carrier is detected. *See* Kaku, Col. 12, lines 27-28. The threshold is then set to the second predetermined threshold L2 in order to determine when a carrier has been dropped. *See* Kaku, Col. 12, lines 30-33.

In contrast to the system of Kaku, embodiments of the present invention as reflected in Claim 1 as amended recite "**establishing a carrier drop detection threshold at a determined level relative to the signal strength**". In other words, as described in the present specification, embodiments of the present invention "provide for the use of an updated or **relative** carrier drop threshold." Specification, Page 15, lines 8-9 (*Emphasis added*). This threshold is not determined in advance. Rather, when a new signal is received, Claim 1 as amended recites a carrier drop detection threshold that changes to a value that is

set relative to the signal strength of the newly received signal corresponding to a particular data pattern.

Applicants submit that steps S1 to S4 in Figure 9 of Kaku, as cited by the Office Action, show a transition between a carrier presence detection threshold L1 and a carrier drop detection threshold L2. Kaku does not establish the carrier drop detection threshold L2 relative to the signal strength, but merely switches from the carrier drop detection threshold L2 to a different threshold, the carrier presence threshold L1. Kaku's carrier drop detection threshold L2 is fixed in value, and remains the same regardless of the received signal strength. Thus, Kaku does not disclose "establishing a carrier drop detection threshold at a determined level relative to the signal strength", as recited by Claim 1. Accordingly, Applicants submit that Claim 1 is patentable over Kaku for at least the reasons described above. Applicants further submit that Claims 11, 18, and 28 as amended are patentable over Kaku for substantially the same reasons.

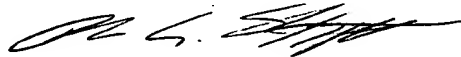
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CONCLUSION

In light of the above remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

It is not believed that an extension of time and/or additional fee(s)-including fees for net addition of claims-are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned under 37 C.F.R. §1.136(a). Any additional fees believed to be due in connection with this paper are hereby authorized to be charged to Deposit Account No. 09-0461.

Respectfully submitted,

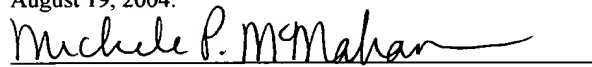


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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on August 19, 2004.


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